

COURSE: Prescribed Fire Planning and Implementation

TOPIC: Setting Objectives in Prescribed Fire (Unit 2)

I. Objectives

- A. Describe the difference between goals and objectives.
- B. Describe the difference between resource and treatment objectives.
- C. Describe the process for setting good objectives.
- D. Discuss some potential difficulties in setting objectives.
- E. Write a burn (treatment) objective for a representative burn on your refuge.

II. Introduction

Webster's dictionary defines management as the "judicious use of means to accomplish an end." Prescribed fire could be considered the "means" or tool but how will we know that we have "accomplished the end?" We must define that desired end condition, i.e., we must set objectives.

A. Differences Between Goals and Objectives

- 1. Goals are broad in nature and reflect the philosophical position and direction of the agency/project. They do not provide a clear description of the desired end condition of an action.
- 2. Objectives are refinements of goals. They are specific and workable and do provide a clear, i.e., measurable, description of the desired end condition of an action.

- B. Example: A typical American Dream: My goal: To be successful someday. My objective: By the age of 40, I will have a job that earns more than \$500,000/year.

III. Setting Objectives: A Process

The planning process can be described as a cycle of four questions: Where are we? Where do we want to be? How will we get there? Did we make it?

We answer the question "Where do we want to be?" when we set objectives. These objectives will later be used to measure progress (did we make it?).

A. Set Objectives Early

Set objectives early in the planning phase of your project. The management strategy will be affected by your choice of objectives and all subsequent decisions reflect the objectives. **Failure to set objectives early can lead to misdirected efforts and inefficient use of time and personnel.**

B. Relate objectives to particular resources of concern.

Know what the reasoning/rationale for an action is. The process of setting objectives should force planners to state what they think is significant and why. This is where good data come in. Objectives should reflect the overall goals or mission of the managing organization.

For example: It is not possible to meet an objective, which states that we will increase population levels for wildlife (i.e., all wildlife). We might more realistically state that we will increase population levels of wildlife species which benefit from early successional stages or increase population levels of a particular species or group of species we state, e.g., wading birds or piping plover.

C. Set Objectives in a Top-Down Framework

A top-down approach provides a framework to consider local objectives within the framework and constraints of larger-scale needs. For example, how do unit objectives contribute to refuge, regional and national goals and objectives? From a biological perspective we should also consider, if appropriate, how unit objectives fit in with the landscape ecology of the area, cumulative effects of several actions and long- versus short-term effects.

D. Be Clear and Concise with Measurable Results

1. To be effective, objectives must be clearly worded and unambiguous; there should be no question about what is being measured or studied.

2. Concise objectives focus the effort and provide the opportunity for a summary statement that is useful when communicating with others.
3. When measurable, statements provide a yardstick against which progress can be evaluated.
4. Conciseness and measurability are often best achieved by stating objectives in quantitative terms, whereas clarity only requires precise and unambiguous wording.

E. Objective Setting Processes should be Flexible and Adaptable

The process of setting objectives should be flexible enough to allow objectives to be changed as new information becomes available (biological reason) or as resource priorities change (political reason). It is best to view the process as dynamic rather than static. Changes in objectives will, however, have ramifications to management actions and monitoring programs. The best strategy is to give ample consideration to objectives at the beginning of project activities and change course only for good cause.

F. SUMMARY: PROPERTIES OF A GOOD OBJECTIVE

1. Specific Focus -- described the outcome or product in understandable terms
2. Realistic/Achievable -- Set realistic boundaries on the management effort (useful and affordable). Use clear, concise, and explicit language. Consider constraints imposed by economics, politics, and policy.
3. Measurable/Monitorable -- State what you want to achieve in specific, measurable terms. How will you know if you are going in the right direction and when you are there?
4. Set Boundaries. Define the geographic and temporal scope of the action, i.e., well defined starting and ending points in time and location

G. Related Concerns:

1. HOW will you accomplish your goal? This will be answered when you select your strategy/ management action/tool.
2. HOW will you know when you get there? Your monitoring, if well designed, should answer this question.

IV. Potential Difficulties in Setting Objectives

A. Imperfect Knowledge

Example: Objective: Prevent the loss of grassland species as functional parts of the ecosystem.

Implementation of this objective is difficult for two reasons: the phrase "functional part" is ambiguous and needs to be precisely defined and the knowledge and data to implement such an objective are not readily available.

B. Inadequate Use of Data

We must strive to find out as much as we can about a problem before we launch into a solution. Background information on history and processes as well as more traditional information such as population numbers, etc. should be consulted. Ideally, this information is already contained in management plans. **Share information among managers and biologists!**

C. Conflicting Objectives

Each piece of land cannot be managed for the good of everything. For example, it might be difficult to manage for maximum species diversity and a particular species of concern (e.g., endangered) on the same piece of ground.

Where objectives conflict, it is often helpful to rank them. Ranking systems reflect human value judgments and that's okay, but we should document our logic for determining the rankings. This documentation is useful when communicating to others and forces the decision maker to critically examine what is important and why.

Those objectives that are highly rated should form the overall basis for the direction of the management action.

D. Institutional Memory

We have a very poor track record in this regard. Past objective statements may be overlooked or discarded and not replaced. If we are to make any progress in this we must ensure that objectives are maintained, updated as necessary, communicated to new personnel, and reiterated to biologists and managers.

V. Resource versus Treatment Objectives

Fire is a tool in resource management. We need to set treatment objectives for the unit which relate back to resource goals and objectives. Ideally, these are articulated elsewhere, such as in a Comprehensive Plan, Fire Management Plan or Habitat Management Plan, and need only be referenced in the burn plan. Generally, with regard to fire resource objectives, relate to hazard fuel reduction or habitat management goals.

Treatment objectives relate to specific actions to be taken to attain the land management goals and objectives. These objectives are either black or white; either they are attained by the burn, or they are not. They should be carefully stated in the prescribed burn plan for the unit.

VI. Exercise

Within your group, read the assigned status/recovery recommendation for either the Western Sage Grouse or the Baird's Sparrow (pages 19-20). Your group assignment is to develop one (1) management goal for your assigned species, one (1) resource objective, and one (1) burn plan objective. The burn plan objective has to relate to the resource objective which in turn has to relate to the management goal. Be prepared to discuss your selections.

Literature Used to Develop Lesson Plan

Setting Objectives - A prerequisite of Ecosystem Management. Richard L. Schroeder and M. E. Keller. (USFWS). Pages 1-4 in Ecosystem Management: Rare Species and Significant Habitats. New York State Museum Bulletin 471. 1990.

